APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,024	03/28/2002	Albertus Cornelis Den Brinker	NL 000287	4469

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER
PIERRE, MYRIAM

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

<table>
<tr>
<td rowspan="2" style="text-align:center;">Office Action Summary</td>
<td>Application No.</td>
<td>Applicant(s)</td>
</tr>
<tr>
<td>10/031,024</td>
<td>DEN BRINKER ET AL.</td>
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<td></td>
<td>Examiner</td>
<td>Art Unit</td>
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<td>Myriam Pierre</td>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 May 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,2,4,5 and 7-18</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,2,4,5 and 7-18</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☒ Certified copies of the priority documents have been received in Application No. <u>EP0004599</u>.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   The text of those sections of Title 35, U.S. Code not included in this action can be found

in a prior Office action.

Response to Arguments

2.   Applicant's arguments filed 05/01/06 have been fully considered but they are not

persuasive.

As to claims 1 and 8, Applicant argues that Dahlgren et al. (Radar Signal Detection Via

ARMA Modeling – Proceedings of the Twenty-Seventh Southeastern Symposium - 95) neither

teaches or suggests "splitting the target spectrum in at least a first part and a second part in

response to a determination by a logarithmic regression, such that an iterative procedure is used

in a frequency domain to obtain a better split than an initial split until a stop criterion is met".

Examiner respectfully disagrees.   Dahlgren et al. teach linear regression (equation 7 and 8) in

which the summation has an iteration between (k, a) the stop criterion is a and also uses Fourier

transform for the spectrum estimation to determine the location of spectrum lines.   Therefore,

Dahlgren et al. do teach splitting the target spectrum in at least a first part and a second part in

response to a determination by a logarithmic regression, such that an iterative procedure is used

in a frequency domain to obtain a better split than an initial split until a stop criterion is met,

page 437, equations 3, and 7-8, and ARMA modeling para 2 lines 10-15, para 3 lines 1-2, and

para 3 lines 1-5 and 11-18.

As to claims 9-10, Applicant argues that Dahlgren et al. neither teaches or

suggests "in response a determination by a logarithmic regression, such that an iterative

procedure is used in a frequency domain to obtain a better split than an initial split until a stop

criterion is met". This argument is not persuasive. Dahlgren et al. teach linear regression

(equation 7 and 8) in which the summation has an iteration between (k, a) the stop criterion is a

and also uses Fourier transform for the spectrum estimation to determine the location of

spectrum lines. Therefore, Dahlgren et al. do teach splitting the target spectrum in at least a first

part and a second part in response to a determination by a logarithmic regression, such that an

iterative procedure is used in a frequency domain to obtain a better split than an initial split until

a stop criterion is met, page 437, equations 3, and 7-8, and ARMA modeling para 2 lines 10-15,

para 3 lines 1-2, and para 3 lines 1-5 and 11-18. Applicant argues that Bloebaum (6,070,137)

does not cure the defects of Dahlgren. Examiner respectfully disagrees. Bloebaum teach

spectral subtraction or noise reduction by subtracting portion of the noise power spectral density

for current speech power spectral, col. 3 lines 21-31. Therefore, Bloebaum does cure the defects

of Dahlgren.

As to claims 11 and 13, Applicant argues that Dahlgren et al. neither teaches or

suggests "in response a determination by a logarithmic regression, such that an iterative

procedure is used in a frequency domain to obtain a better split than an initial split until a stop

criterion is met". This argument is not persuasive. Dahlgren et al. teach linear regression

(equation 7 and 8) in which the summation has an iteration between (k, a) the stop criterion is a

and also uses Fourier transform for the spectrum estimation to determine the location of

spectrum lines. Therefore, Dahlgren et al. do teach splitting the target spectrum in at least a first

part and a second part in response to a determination by a logarithmic regression, such that an

iterative procedure is used in a frequency domain to obtain a better split than an initial split until

a stop criterion is met, page 437, equations 3, and 7-8, and ARMA modeling para 2 lines 10-15,

para 3 lines 1-2, and para 3 lines 1-5 and 11-18. Applicant argues that Miseki et al. (6,167,375)

do not cure the defects of Dahlgren. This argument is not persuasive. Miseki et al. teach

approximating the spectrum of the noise component, Fig. 17-18 and col. 23 lines 21-35; the

predictor estimates the spectral shape, thus modeling the spectrum, Fig. 18 is the noise encoder

of Fig. 15, thus modeling the spectrum of noise, via filter parameters such as AR, MA, or ARMA

used in the predictor, element 547, of Fig. 18. Therefore, Miseki et al. do cure the defects of

Dahlgren.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, Machine, manufacture, or composition of
> matter, or any new and useful improvement thereof may obtain a patent therefor, subject to the conditions
> and requirements of this title.   .

3.   Claims 1, 2, 4-5 and 7, 9-12 and 16 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

Claims 1 and 9-13 are drawn to a mathematical algorithm, per se. Claims to processes

that do nothing more than solve mathematical problems or manipulate abstract ideas or concepts

are non-statutory. If the "acts" of a claimed process manipulate only numbers, abstract concepts

or ideas, or signals representing all of the foregoing, the acts are not being applied to appropriate

subject matter. Schrader, 22 F.3d at 294-95, 30 USPQ2d at 1458-59. Thus, a process consisting

solely of mathematical operations without some claimed practical application is drawn to non-

statutory subject matter. In this case, the claims merely recite the steps of splitting and targeting

a spectrum, without any practical application being recited.

Claim Rejections - 35 USC § 102

4.   Claims 1-2, 4-5, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by

Dahlgren et al. (IEEE-95).

As to claims 1 and 8, Dahlgren et al. teach

splitting the target spectrum in at least a first part and a second part in response a

determination by a logarithmic regression, such that an iterative procedure is used in a frequency

domain to obtain a better split than an initial split until a stop criterion is met (page 437 ARMA

Model left column first paragraph, equations 3 and 7-8, para 2 lines 10-15, para 3 lines 1-2, and

para 3 lines 1-5 and 11-18, paragraph 1 lines 1-8);

using a first model operation (b_k coefficients are set to zero, except b_o=1) on the first part

of the target spectrum (ARMA model, linear difference equation) to obtain auto-regressive

parameters (the AR model can be extracted from ARMA model (linear difference equation) if all

the b_k coefficients are set to zero, except b_o=1, page 437 ARMA Model left column second

paragraph lines 8-12).

using a second model operation (a_k coefficients are set to zero, except a_o=1) on the

second part of the target spectrum (ARMA model, linear difference equation) to obtain moving-

average parameters (The MA model is extracted from the ARMA model (linear difference

equation) by setting all of the a_k coefficients are set to zero, except $a_0=1$, page 437 ARMA Model left column first paragraph lines 8-12); and

combining the auto-regressive parameters (sharp peaks) and the moving average (deep valleys) parameters (ARMA) to obtain the filtered parameters (the AR model is appropriate for spectra containing sharp peaks, the MA model is appropriate for spectra that contains deep valleys, the combined ARMA model contains both of these extremes, sharp peaks and deep valleys, page 437 ARMA Model right column second paragraph lines 1-6 and paragraph 3 lines 21-27)

As to claim 2, which depends on claim 1, Dahlgren et al. teach

using the first modeling operation on a reciprocal of the second part of the target spectrum (page 437, ARMA modeling, equation 5; AR modeling process, the first part, is the reciprocal of the MA modeling process, or the second part because the AR process involves the all-pole model and the MA modeling process involves the opposite or reciprocal, the all-zero model).

As to claim 4, which depends on claim 1, Dahlgren et al. teach

using a first modeling operation on a first part of a previous split to obtain new auto-regressive parameters (equations 7-8 page 437);

using a second modeling operation on a second part of a previous split to obtain new moving-average parameters (equations 6 and 8 page 437);

re-attributing parts of the first part of the previous split that could be modeled accurately

by the first modeling operation to the second part of the previous split (ARMA, page 437 ARMA

Modeling left column second paragraph lines 1-6)

As to claim 5, which depends on claim 4, Dahlgren et al. teach

dividing the first part of the previous split by an estimate of the target spectrum based on

moving-average parameters (MLE, maximum likelihood estimation of noise for ARMA, which

includes the MA parameters page 437 right column second paragraph);

dividing the second part of the previous split by an estimate of the target spectrum based

on auto-regressive parameters (AIC is a good estimator for the AR and MA, page 437, equations

6-9, ARMA Modeling, right column, second paragraph lines 1-6).

Claim Rejections - 35 USC § 103

1.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlgren et al.

(IEEE-95) in view of Devito (6,001,065).

As to claim 7, which depends on claim 1, Dahlgren et al. does not teach splitting via a

mapping function.

However, Devito does teach splitting via a mapping function (col. 9 lines 30-40 and col.

2 lines 6-12 and lines 14-21 and col. 8 lines 65-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention, to implement AR and MA techniques of Dahlgren into the signal analysis of Devito,

because Devito teaches that this would provide processing of those signals in real time to

develop a set of control parameters, col. 2 lines 6-12 and lines 14-21.

2.   Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlgren et

al. (IEEE-95) in view of Bloebaum et al. (6,070,137).

As to claims 9 and 10 Dahlgren teach

the step of modeling comprising:

splitting the target spectrum in at least a first part and a second part in response a

determination by a logarithmic regression, such that an iterative procedure is used in a frequency

domain to obtain a better split than an initial split until a stop criterion is met (page 437 ARMA

Model left column first paragraph, equations 3 and 7-8, para 2 lines 10-15, para 3 lines 1-2, and

para 3 lines 1-5 and 11-18, paragraph 1 lines 1-8);

using a first model operation (b_k coefficients are set to zero, except $b_o=1$) on the first part

of the target spectrum (ARMA model, linear difference equation) to obtain auto-regressive

parameters (the AR model can be extracted from ARMA model (linear difference equation) if all

the b_k coefficients are set to zero, except $b_o=1$, page 437 ARMA Model left column first

paragraph).

using a second model operation (a_k coefficients are set to zero, except $a_o=1$) on the

second part of the target spectrum (ARMA model, linear difference equation) to obtain moving-

average parameters (The MA model is extracted from the ARMA model (linear difference

equation) by setting all of the a_k coefficients are set to zero, except $a_o=1$, page 437 ARMA Model

left column first paragraph); and

combining the auto-regressive parameters (sharp peaks) and the moving average (deep valleys) parameters (ARMA) to obtain the filtered parameters (the AR model is appropriate for spectra containing sharp peaks, the MA model is appropriate for spectra that contains deep valleys, the combined ARMA model contains both of these extremes, sharp peaks and deep valleys, page 437 ARMA Model right column first paragraph)

modeling a spectrum of the noise by determining filter parameters of a filter which has a frequency response approximating the spectrum of the noise (page 437 right col. first paragraph, modeling a filter based on noise is in the MA process).

Dahlgren teach approximating modeling a filter based on noise (page 437 right col. first paragraph).

Dahlgren does not explicitly teach modeling a filter based on spectral subtraction or noise reconstruction.

However, Bloebaum does teach

modeling a spectrum of the noise by determining filter parameters of a filter which has a frequency response approximating the spectrum of the noise (MBE, mixed band excitation, models background noise, in frequency domain, col. 5 lines 21-33, col. 2 lines 20-26).

subtracting the reconstructed noise from the audio signal to obtain a noise-filtered audio signal (spectral estimator, subtracts portion of the noise power spectral density fro current speech power spectral, col. 3 lines 21-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to implement AR and MA techniques of Dahlgren into the adaptive spectral

enhancement filtering technique of Bloebaum, because Bloebaum teach that this would provide

a reduction in the variance in of the noise estimate, as taught by Bloebaum, col. 5 lines 27-35.

3.   Claims 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dahlgren et al. (IEEE-95) in view of Miseki et al. (6,167,375).

As to claims 11 and 13,

Dahlgren et al. teach

the steps (necessary in ARMA) modeling comprising:

splitting the target spectrum in at least a first part and a second part in response a

determination by a logarithmic regression, such that an iterative procedure is used in a frequency

domain to obtain a better split than an initial split until a stop criterion is met (page 437 ARMA

Model left column first paragraph, equations 3 and 7-8, para 2 lines 10-15, para 3 lines 1-2, and

para 3 lines 1-5 and 11-18, paragraph 1 lines 1-8);

using a first model operation (b_k coefficients are set to zero, except $b_o=1$) on the first part

of the target spectrum (ARMA model, linear difference equation) to obtain auto-regressive

parameters (the AR model can be extracted from ARMA model (linear difference equation) if all

the b_k coefficients are set to zero, except $b_o=1$, page 437 ARMA Model left column first

paragraph).

using a second model operation (a_k coefficients are set to zero, except $a_o=1$) on the

second part of the target spectrum (ARMA model, linear difference equation) to obtain moving-

average parameters (The MA model is extracted from the ARMA model (linear difference

equation) by setting all of the a_k coefficients are set to zero, except $a_o=1$, page 437 ARMA Model

left column first paragraph); and

combining the auto-regressive parameters (sharp peaks) and the moving average (deep

valleys) parameters (ARMA) to obtain the filtered parameters (the AR model is appropriate for

spectra containing sharp peaks, the MA model is appropriate for spectra that contains deep

valleys, the combined ARMA model contains both of these extremes, sharp peaks and deep

valleys, page 437 ARMA Model right column first paragraph; the ARMA includes the

combination of AR and MA).

Dahlgren et al. does not explicitly teach modeling waveform parameters.

However, Miseki et al. do teach

determining basic waveforms in the audio signal (CELP, col. 2 lines18, 49-51);

obtaining a noise component from the audio signal by subtracting the basic waveforms

from the audio signal (CELP, suppresses distortion of a waveform, col. 2 lines 51-55,

suppression of the distortion of waveform is necessarily subtracting or removing the distortion or

noise portion of the waveform).

modeling a spectrum of the noise component by determining filter parameters of a filter

which has a frequency response approximating the spectrum of the noise component (Fig. 17-18

and col. 23 lines 21-35; the predictor estimates the spectral shape, thus modeling the spectrum,

Fig. 18 is the noise encoder of Fig. 15, thus modeling the spectrum of noise, via filter parameters

such as AR, MA, or ARMA used in the predictor, element 547, of Fig. 18);

including the filter parameters (AR, MA, or ARMA) and waveform parameters (CELP)

representing the necessary basic waveforms in an encoded audio signal (col. 2 line 51 and col. 23

lines 20-26).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to implement the ARMA of Dahlgren into model waveform parameters via AR, MA,

or ARMA parameters of Miseki et al., because Miseki et al. teach that this would provide the

background noise with less bits by encoding the components after converting them into

parameters in the frequency domain or transform domain, as taught by Miseki et al., col. 2 lines

50-58.

4.   Claims 12, 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dahlgren et al. (IEEE-95) in view of Miseki et al. (6,167,375) in further view of Atsmon et al.

(6,607,136 benefit of provisional application 60/153,858)

As to claim 12, Dahlgren teaches all the limitations of claim 11, Dahlgren does not

explicitly teach decoding an audio signal.

However, Miseki et al. teach encoding and decoding of audio signals (Abstract) which

includes the method and means for

filtering a white noise signal (background noise) to necessarily obtain reconstructed noise

component, which filtering is determined by the filter parameters (col. 23 lines 21-35 and col. 1

lines 8-13).

synthesizing basic waveforms based on the waveform parameters (CELP, col. 2 lines 51-

55; CELP well known for synthesizing speech signals or waveforms)

adding the reconstructed noise component to the synthesized basic waveform to obtain a

decoded audio signal (col. 25 lines 51-67; adding the reconstructed noise component is a

necessary reconstruction process of a synthesized waveform).

At the time of the invention, it would have been obvious to one of ordinary skill in the art to implement the ARMA modeling of Dahlgren et al. into the encoding and decoding technique of Miseki et al., because Miseki et at. teach that this would provide efficiency in reconstructing the original signal waveform, wherein a speech signal including background noise is encoded by compressing it efficiently in a state which is as close to the original signal speech as possible, as taught by Miseki et al., col. 1 lines 8--13.

Neither Dahlgren et al. in view of Miseki et al. explicitly teach implementing an audio player.

However, Atsmon et al. do teach audio player (col. 35 lines 10-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the synthesized waveform of Dahlgren et al. in view of Miseki et al., into the audio player of Atsmon et al., because Atsmon et al. teach that this would provide audio signal technique in an audio player for transmission of data streams, as taught by Atsmon et al. (col. 35 lines 5-11).

As to claim 14, Dahlgren does not explicitly teach decoding an audio signal.

However, Miseki et al. teach encoding and decoding of audio signals (Abstract) which includes the method and means for

filtering a white noise signal (background noise) to necessarily obtain reconstructed noise component, which filtering is determined by the filter parameters (col. 23 lines 21-35 and col. 1 lines 8-13).

synthesizing basic waveforms based on the waveform parameters (CELP, col. 2 lines 51-55; CELP well known for synthesizing speech signals or waveforms)

adding the reconstructed noise component to the synthesized basic waveform to obtain a decoded audio signal (col. 25 lines 51-67; adding the reconstructed noise component is a necessary reconstruction process of a synthesized waveform).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the ARMA modeling of Dahlgren et al. into the encoding and decoding technique of Miseki et al., because Miseki et at. teach that this would provide efficiency in reconstructing the original signal waveform, wherein a speech signal including background noise is encoded by compressing it efficiently in a state which is as close to the original signal speech as possible, as taught by Miseki et al., col. 1 lines 8-13.

Neither Dahlgren et al. in view of Miseki et al. explicitly teach implementing an audio player.

However, Atsmon et al. do teach audio player (col. 35 lines 10-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the synthesized waveform of Dahlgren et al. in view of Miseki et al., into the audio player of Atsmon et al., because Atsmon et al. teach that this would provide audio signal technique in an audio player for transmission of data streams, as taught by Atsmon et al. (col. 35 lines 5-11).

As to claim 15, which depends on claim 13, neither Dahlgren et al. nor Miseki et al. explicitly teach implementing an audio player.

However, Atsmon et al. do teach audio player (col. 35 lines 10-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to implement to implement the synthesized waveform of Dahlgren et al. in view of

Miseki et al., into the audio player of Atsmon et al., because Atsmon et al. teach that this would

provide transmission of data streams, thus if sound is utilized, a conventional audio file is played

by a software audio player, as taught by Atsmon et al. (col. 35 lines 5-11).

As to claim 16, Dahlgren et al. does not teach waveform coding.

However, Miseki et al. do teach

Miseki et al. teach

waveforms parameters representing basic waveforms (CELP, col. 2 lines18, 49-51);

a spectrum of the noise component represented by a combination of autoregressive

parameters and moving average parameters (col. 23 lines 21-35 and col. 2 line 51 and col. 23

lines 20-26; the predictor estimates the spectral shape, thus modeling the spectrum, Fig. 18 is the

noise encoder of Fig. 15, thus modeling the spectrum of noise, via filter parameters such as AR,

MA, or ARMA used in the predictor, element 547, of Fig. 18, thus the ARMA includes the

combination of AR and MA).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to implement the ARMA modeling of Dahlgren et al. into the waveform modeling of

Miseki et al., because Miseki et al. teach that this would provide background noise with less bits

by encoding the components after converting them into parameters in the frequency domain or

transform domain, as taught by Miseki et al., col. 2 lines 50-58.

As to claim 17, which depends on claim 16, Dahlgren et al. does not explicitly teach implementing a storage medium for the encoded audio signal.

However, Miseki et al. do teach

a storage medium on which an encoded audio signal is stored (col. 27, lines 53-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement the ARMA modeling of Dahlgren et al. into storage medium of Miseki et al., because Miseki et al. teach that this would provide storage for encoded audio signals for updating, thus the output is stored in a buffer to update the same in preparation for the input of the spectral shape of the next frame, as taught by Miseki et al., col. 27, lines 53-57.

As to claim 18, which depends on claim 14, neither Dahlgren et al. nor Miseki et al. explicitly teach an audio system comprising an audio player.

However, Atsmon et al. do teach an audio system comprising an audio player (col. 35 lines 10-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement to implement the synthesized waveform of Dahlgren et al. in view of Miseki et al., into the audio player of Atsmon et al., because Atsmon et al. teach that this would provide transmission of data streams, thus if sound is utilized, a conventional audio file is played by a software audio player, as taught by Atsmon et al. (col. 35 lines 5-11).

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Myriam Pierre whose telephone number is 571-272-7611.

The examiner can normally be reached on Monday – Friday from 8:30-5:30p.m.

5.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

6.   Information as to the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Myriam Pierre

AU 2626

9/18/06

RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER